

# Overview of the Oak Ridge Site Specific Advisory Board and its Role in the DOE EM Program



Dave Adler  
ORSSAB DOE Liaison  
July 13, 2011



## Overview

Oak Ridge Site Specific Advisory Board

The Environmental Management Program

Stewardship

Important Documents

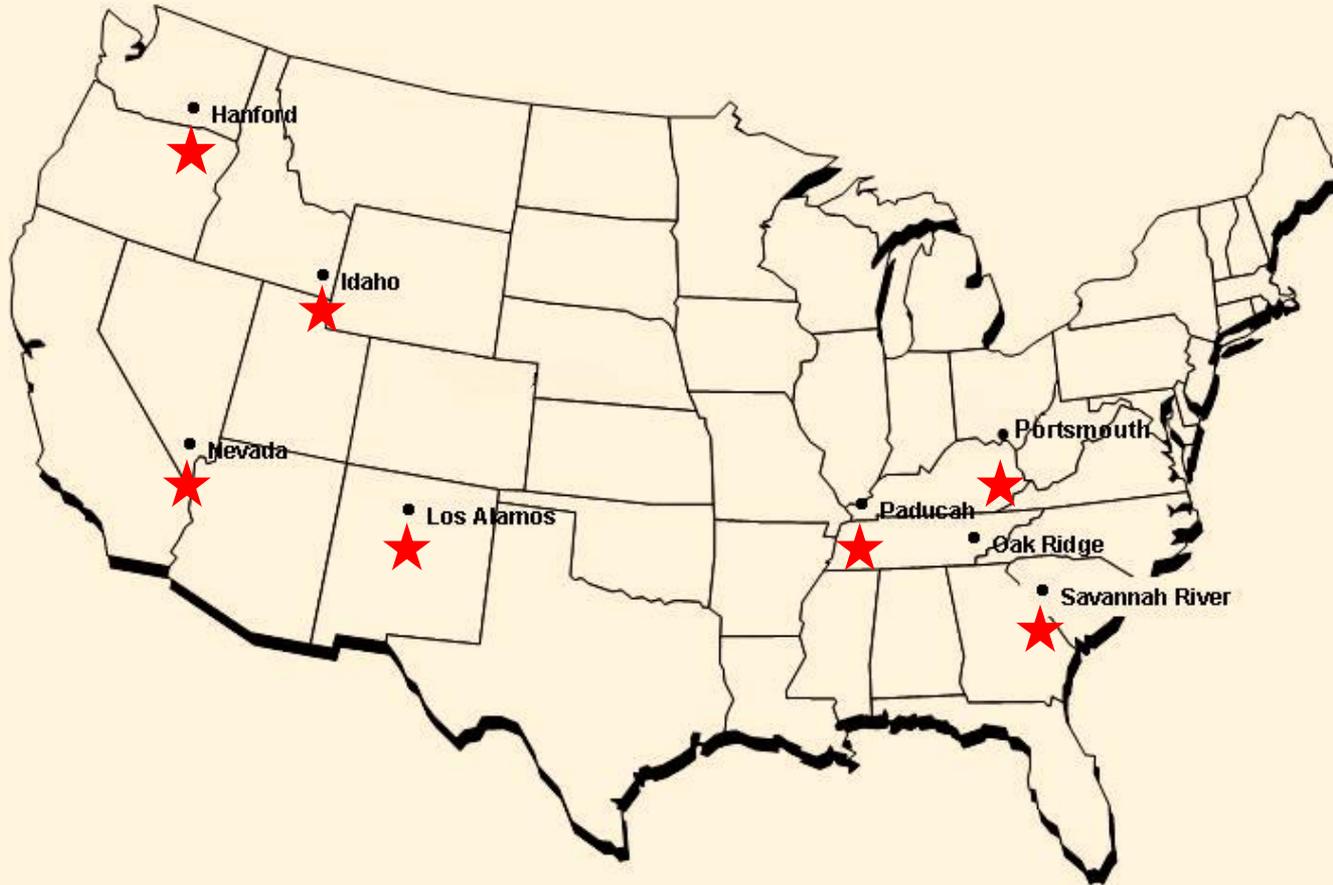
How recommendations are made

Board leadership and liaisons

Member responsibility

# ORSSAB is Part of a National EM SSAB

Other boards are located at:



Each SSAB has its own set of bylaws and operating procedures. Twice each year they all gather with DOE EM officials to discuss common issues.



EM SSAB meeting held in Oak Ridge in Spring 2010

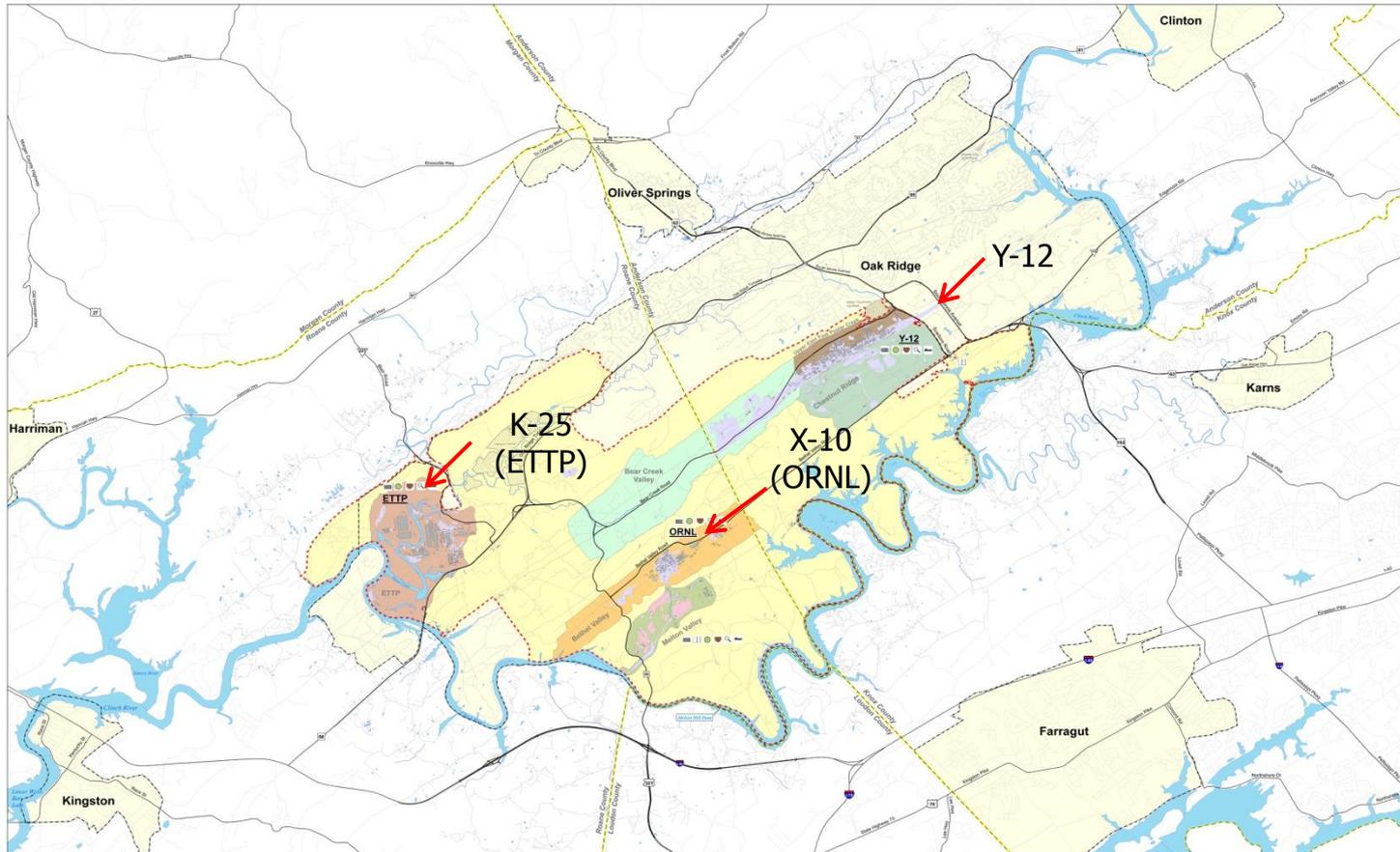


EM SSAB meeting held in Santa Fe in Fall 2010

## ORSSAB's Primary Responsibility

- Provide advice and recommendations to DOE Oak Ridge on cleanup and waste management operations on the ORR
- Provide input on cleanup project prioritization as it relates to DOE's EM budget requests
- Stewardship of areas with residual contamination following completion of cleanup work

# The Oak Ridge Reservation



<ul style="list-style-type: none"> <li>— Primary Roads</li> <li>— Secondary Roads</li> <li>--- City Limits</li> <li>--- County Boundaries</li> <li>--- Oak Ridge Reservation Boundaries</li> </ul>	<ul style="list-style-type: none"> <li>■ Buildings</li> <li>■ Contamination Areas</li> <li>■ Remediated Under Deed Restrictions</li> <li>■ Clean Parcels</li> <li>■ Rivers and Lakes</li> </ul>	<p><b>Watershed Decision Areas</b></p> <ul style="list-style-type: none"> <li>■ ETPP</li> <li>■ Melton Valley</li> <li>■ Bethel Valley</li> <li>■ Upper East Fork Poplar Creek</li> <li>■ Bear Creek Valley</li> <li>■ Chestnut Ridge</li> </ul>	<p><b>Land Use Controls</b></p> <ul style="list-style-type: none"> <li>■ Fence</li> <li>    Deed Restriction</li> <li>● Sign</li> <li>● Security Patrol</li> <li>● Monitoring</li> <li>— Excavation/Penetration Permit</li> </ul>			<p>MAP TITLE: Oak Ridge Reservation Stewardship          DATE: 5/10/08          MAP DOCUMENT NAME: ESAB_1.mxd          COORDINATE SYSTEM: NAD83 State Plane East          CREATED BY: Carla Wolfe, Bethel-Jacobs Company LLC (BJC)          Environmental Information Management (EIM)          CHECKED BY: Teresa James, BJC, EIM Program Manager</p>	
--	---	--	---	--	--	--	--

\* See provided text for more information on numbered areas.

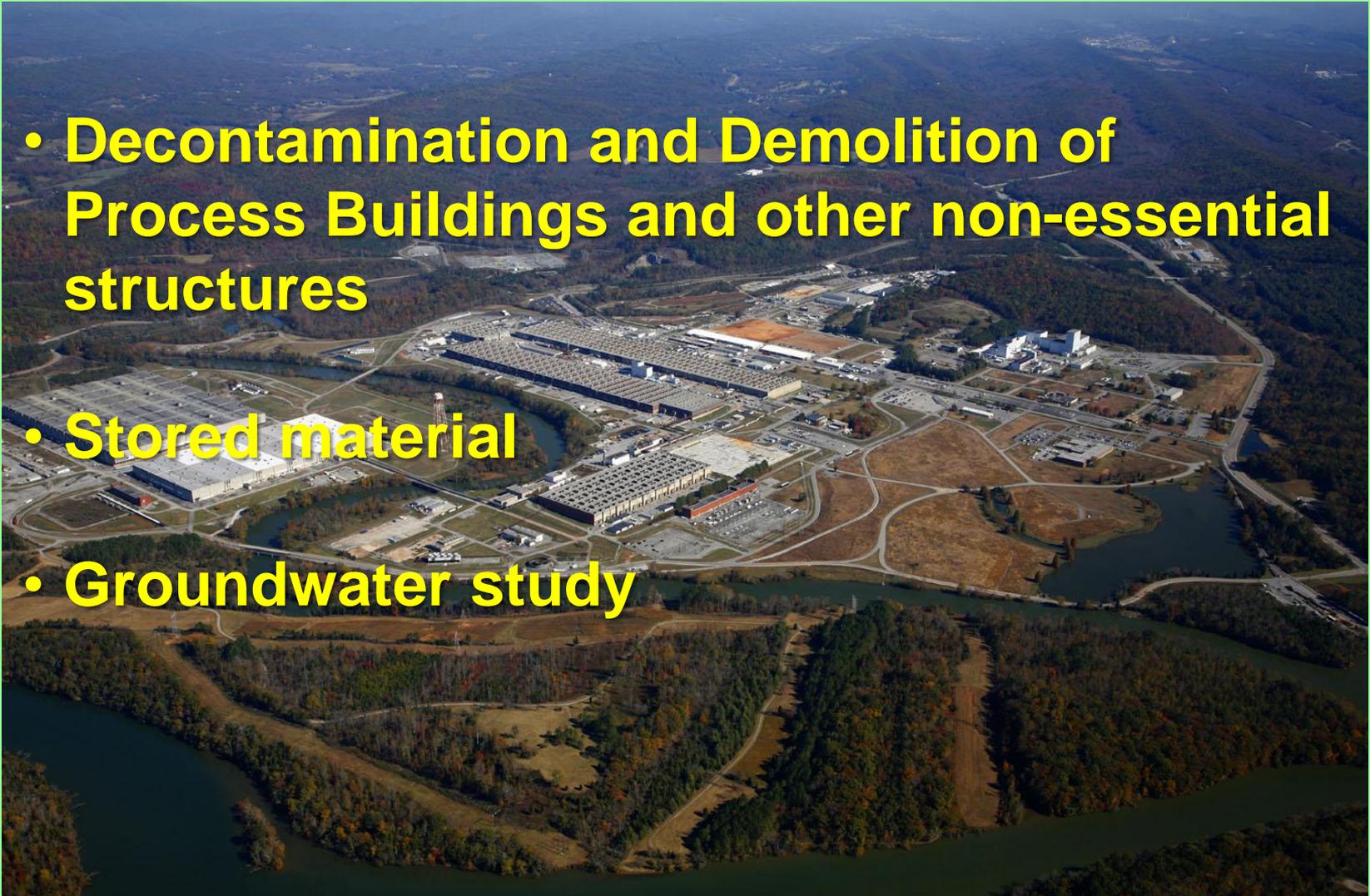
ETTP - East Tennessee Technology Park  
 ORNL - Oak Ridge National Laboratory  
 Y-12 - Y-12 Security Complex

## Other DOE Programs on the Oak Ridge Reservation

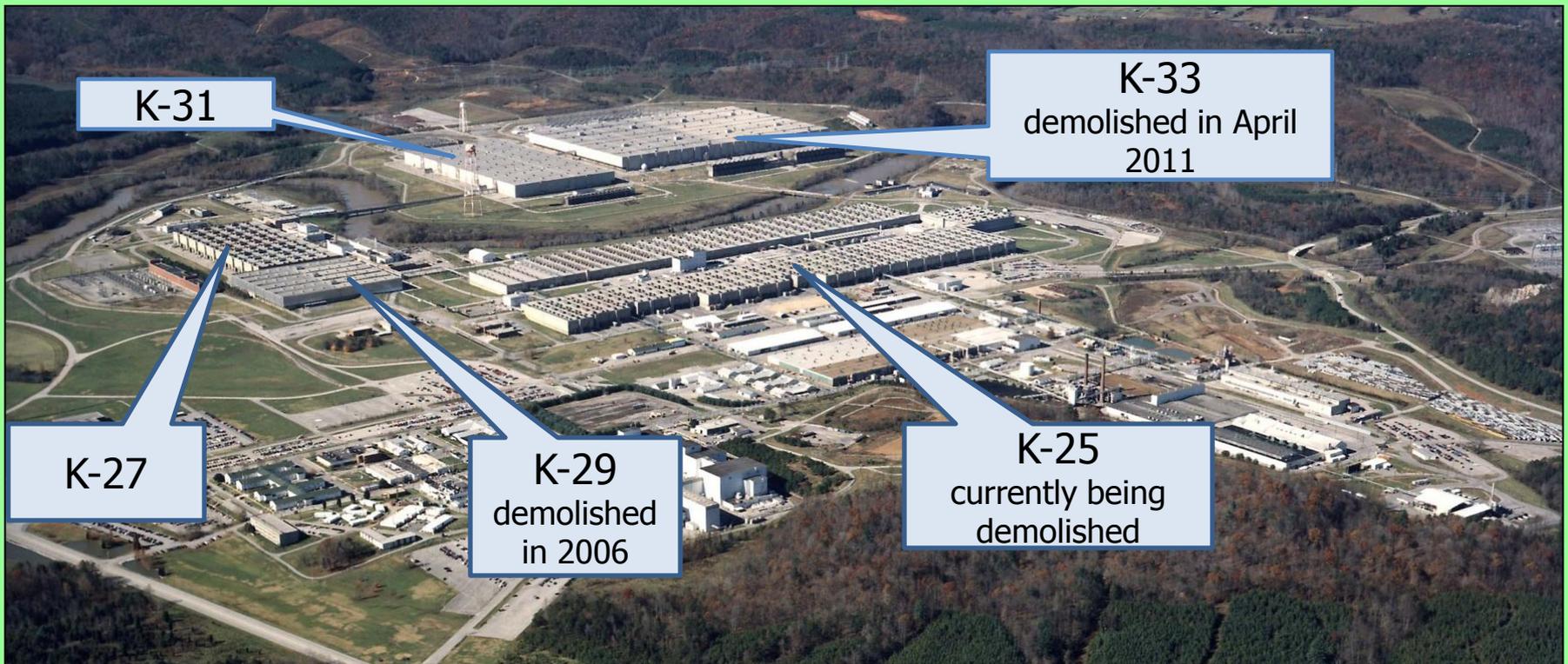
- Office of Science (SC)
- National Nuclear Security Administration (NNSA)
- Nuclear Energy (NE)
- ORR is called an ongoing mission site. Because of these active missions EM works with them related to cleanup activities

# East Tennessee Technology Park formerly the K-25 Gaseous Diffusion Plant

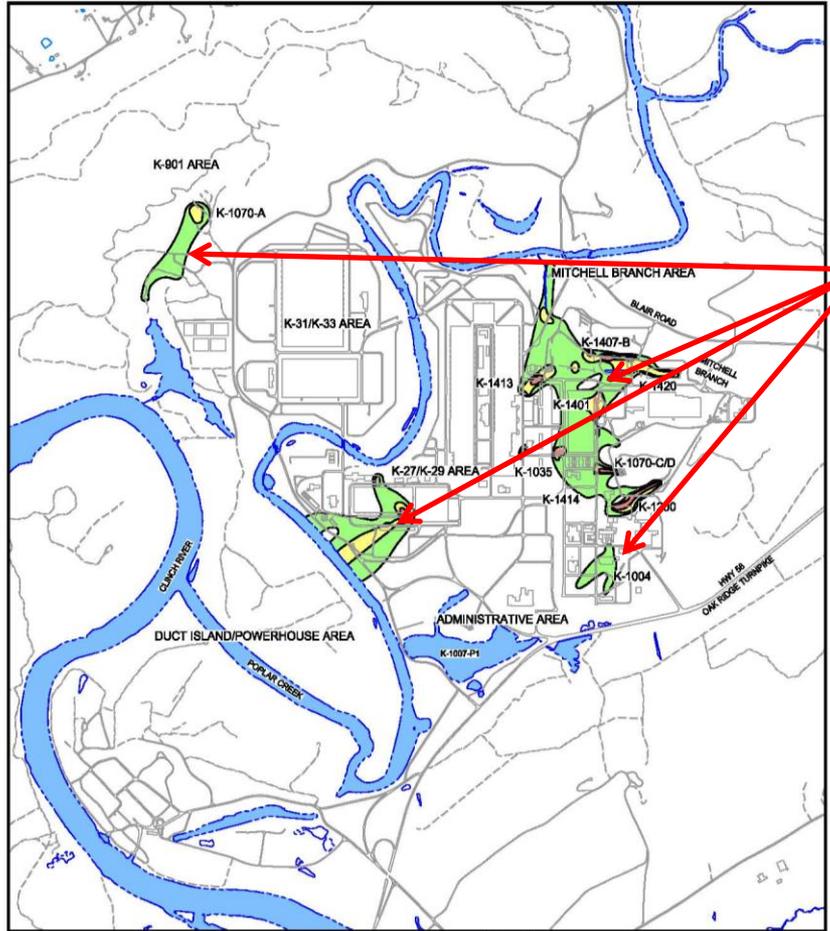
- Decontamination and Demolition of Process Buildings and other non-essential structures
- Stored material
- Groundwater study



# East Tennessee Technology Park formerly the K-25 Gaseous Diffusion Plant



# Groundwater Study at ETTP

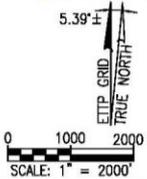


Groundwater Contamination Areas

LEGEND:

<span style="display:inline-block; width:15px; height:10px; background-color:lightgreen; border:1px solid black;"></span>	5 - 100 ug/L
<span style="display:inline-block; width:15px; height:10px; background-color:yellow; border:1px solid black;"></span>	100 - 1000 ug/L
<span style="display:inline-block; width:15px; height:10px; background-color:orange; border:1px solid black;"></span>	> 1000 ug/L

NOTES:  
 1.) ALL CONCENTRATIONS ARE IN  $\mu\text{g/L}$ .  
 2.) VOC PLUME RESULTS REPRESENTS PARENT VOCs ONLY (PCE, TCE, AND 1,1,1-TCA)



TREATABILITY STUDY WORK PLAN  
 FOR SITEWIDE GROUNDWATER AT ETTP

DRAWN BY: P. HOLM	REV. NO./DATE: REV. 1/08-23-08	CAD FILE: /05021/DMGS/081VOC-e
----------------------	-----------------------------------	-----------------------------------

# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Tank W-1A



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Uranium-233 Downblending/Building 3019



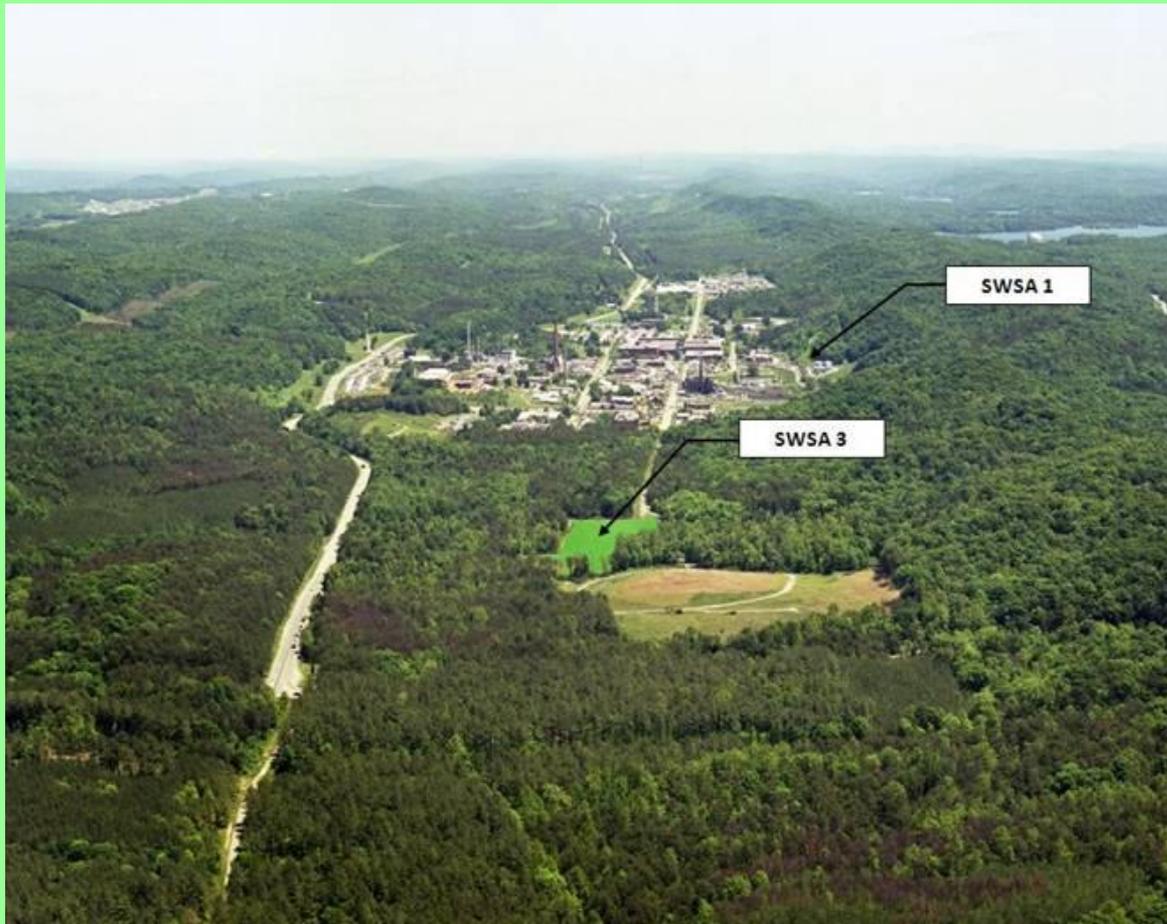
# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Building 3026 Hot Cells



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

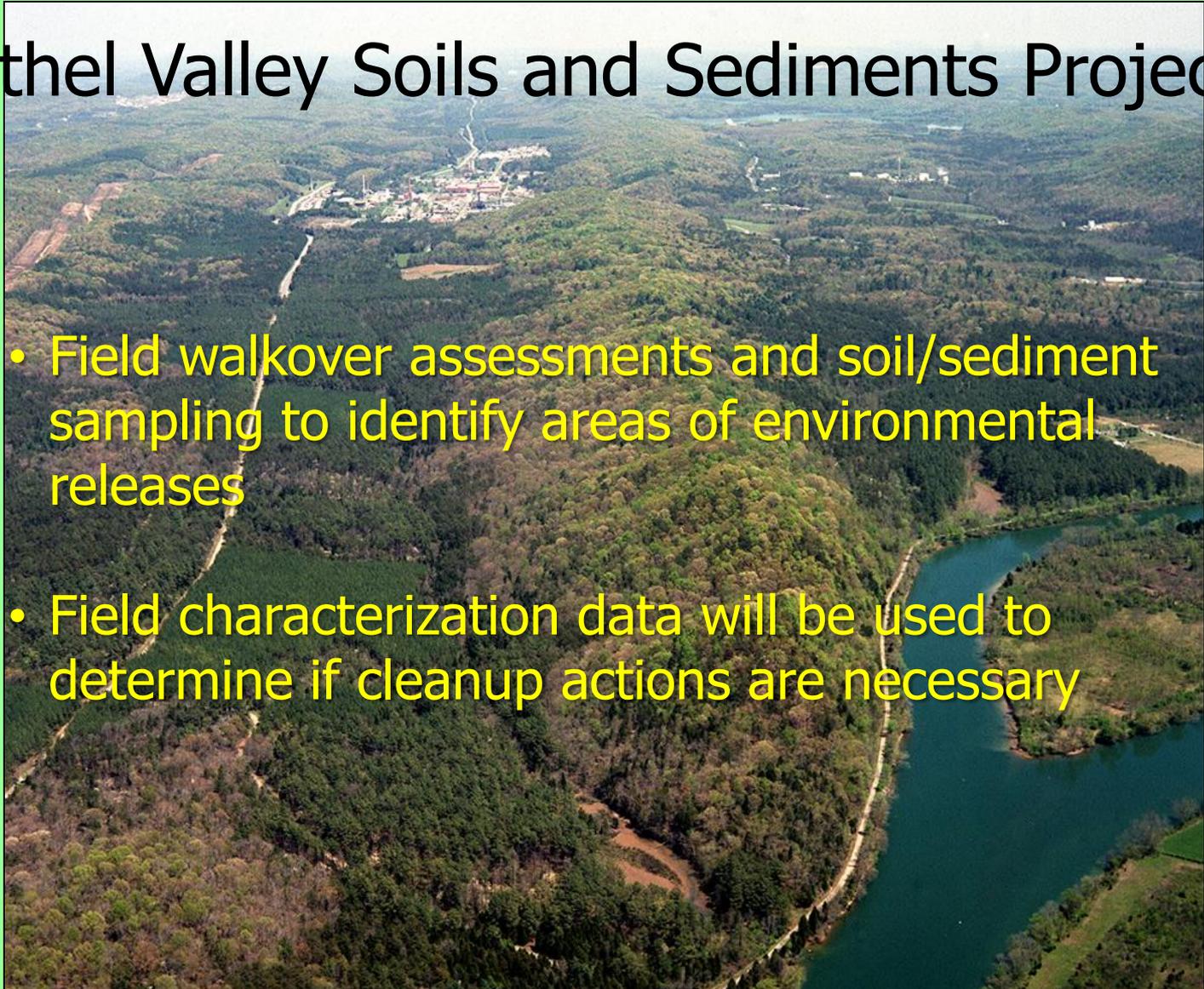
## Bethel Valley Burial Grounds



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Bethel Valley Soils and Sediments Project

- Field walkover assessments and soil/sediment sampling to identify areas of environmental releases
- Field characterization data will be used to determine if cleanup actions are necessary



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

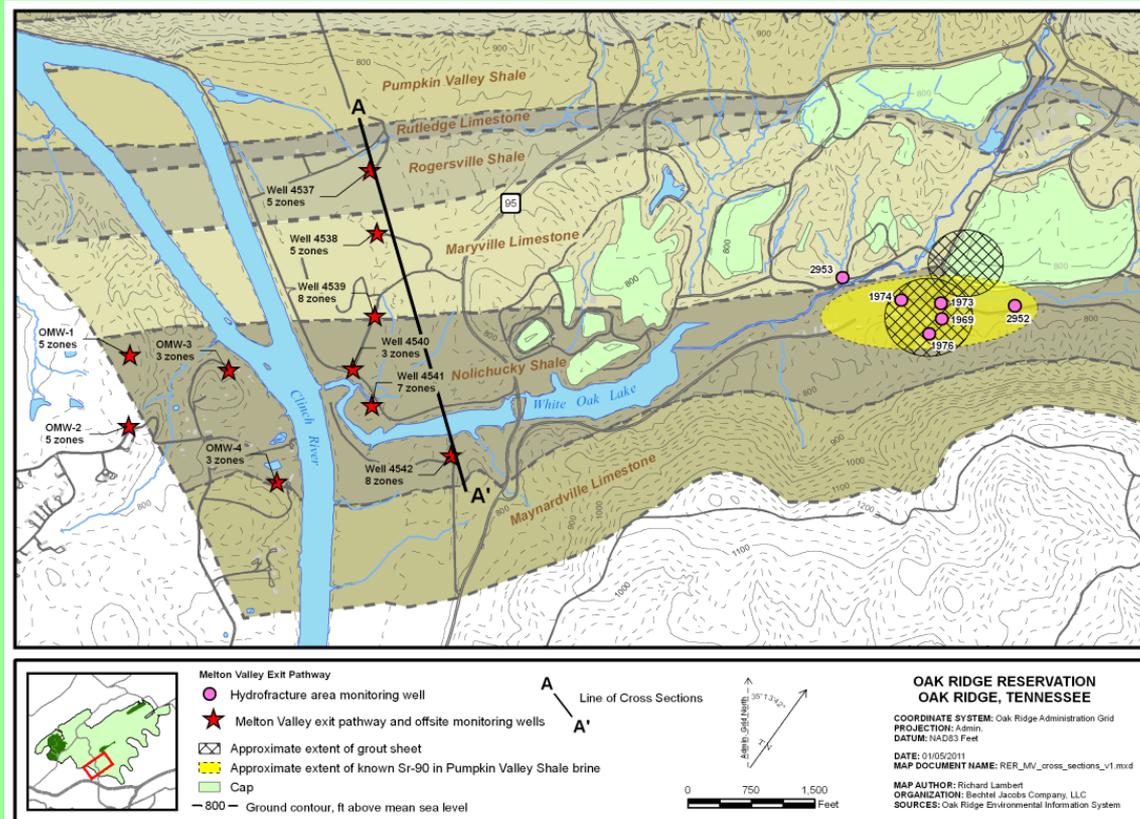
## Melton Valley

- Remediation completed in 2006
- Still to be addressed: inactive reactors, watershed ecology, sediment, and groundwater



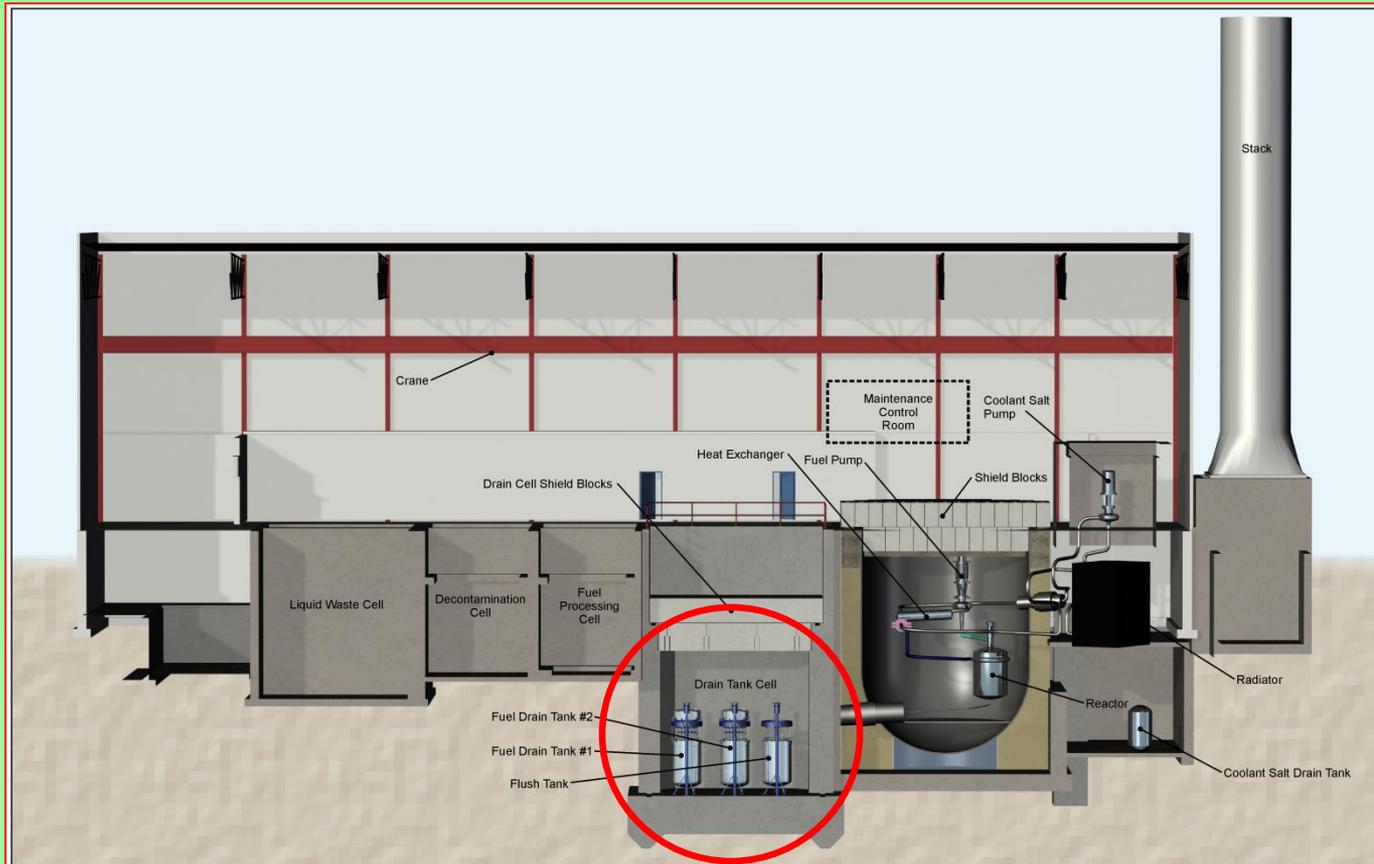
# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Melton Valley Monitoring Wells



# Oak Ridge National Lab (ORNL)/Bethel Valley/Melton Valley

## Molten Salt Reactor Experiment



# Y-12 National Security Complex



# Y-12 National Security Complex



# Y-12 National Security Complex



Upper East Fork Poplar Creek (UEFPC)

# Y-12 National Security Complex

## Upper East Fork Poplar Creek (UEFPC)

- Remedial actions have reduced mercury loading significantly in UEFPC
- Mercury concentrations in some fish species still exceed acceptable levels
- Activities are underway to define the remediation at the 81-10 area which is close to the head waters of the creek
- Work has been done to purge mercury in a portion of the storm sewer system in the West End Mercury Area (WEMA)
- Process has increased the mercury levels being seen in the UEFPC
- Steps are underway to capture as much as possible before going offsite

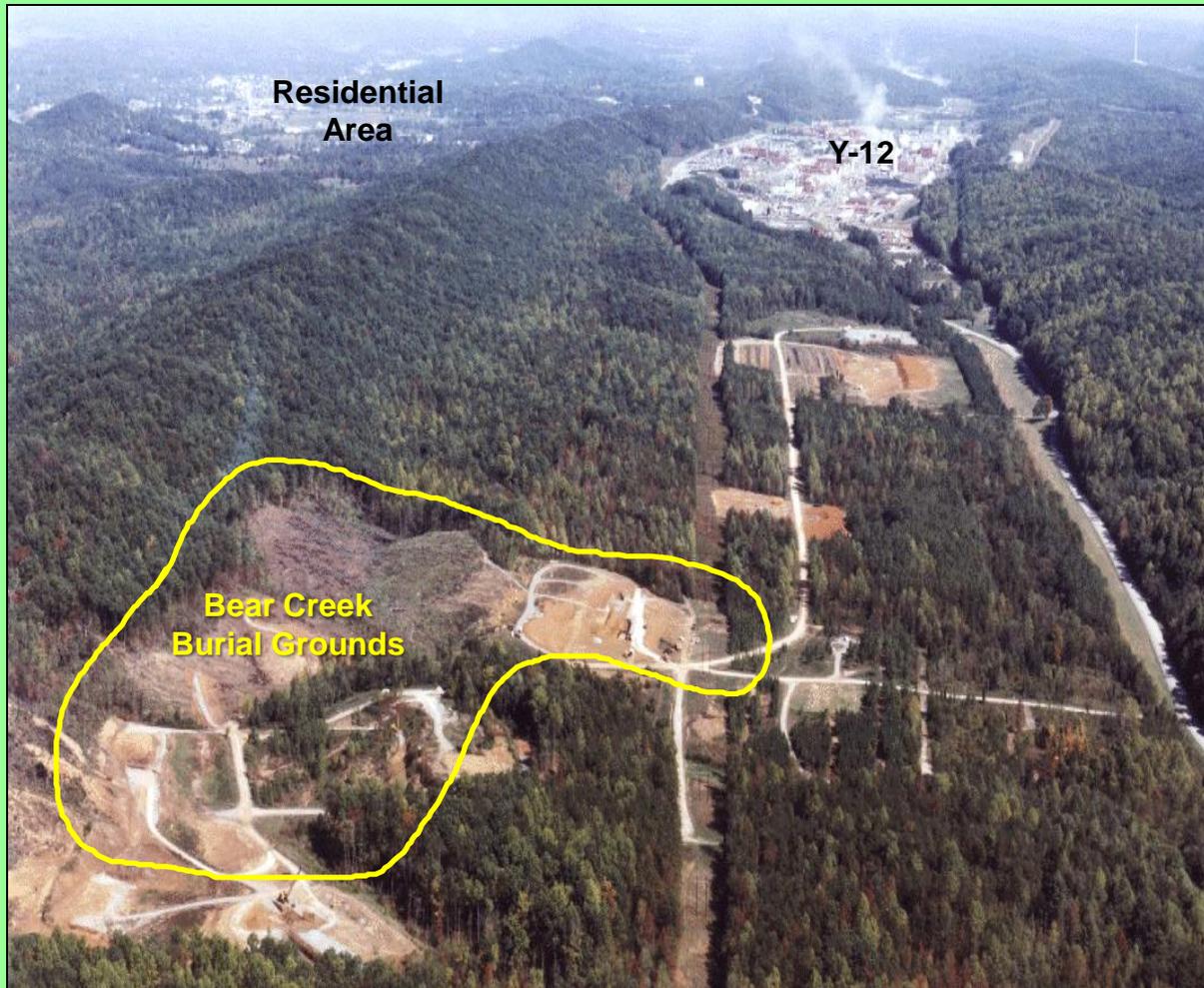
# Bear Creek Valley

## Environmental Management Waste Management Facility



# Bear Creek Valley

## Bear Creek Burial Grounds



## Specific Areas that ORSSAB Provides Input to DOE EM

# Stewardship

‘acceptance of the responsibility and the implementation of controls necessary to maintain long-term protection of human health and the environment posed by residual radioactive and chemically hazardous materials.’

# Stewardship

## Specific Stewardship Functions and Controls

1. Monitoring – regular sampling of all contaminated media to identify possible failure of physical controls and to continually understand the nature and extent of contamination.
2. Maintenance – regular upkeep of systems and controls to ensure long-term effectiveness
3. Surveillance – regular oversight to ensure all necessary activities occur
4. Enforcement – legal constraints to maintain protection of people and the environment
5. Inspection and reevaluation – periodic review of systems to ensure continued need and effectiveness
6. Public participation – involvement of the public to ensure citizen concerns are addressed and information is available

# Stewardship

## Stewardship Areas of Interest on the Oak Ridge Reservation



Melton Valley

# Stewardship

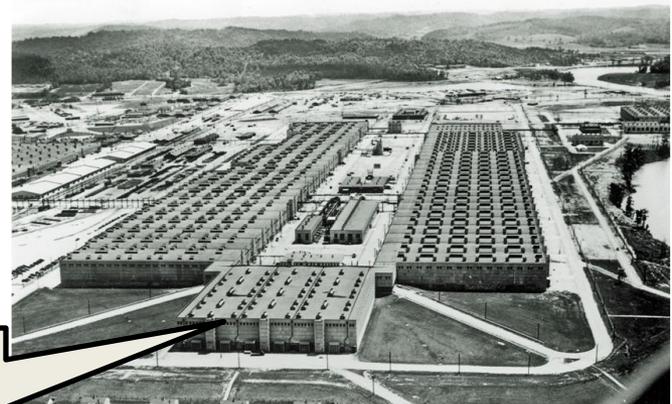
## Historic Preservation

ORSSAB, through the Stewardship Committee has made several recommendations regarding historic preservation of elements of the Oak Ridge Reservation, specifically regarding the North Tower of the K-25 Building at East Tennessee Technology Park and the establishment of an oral history program.



Center for Oak Ridge Oral History

[Interpreting the Historic K 25 Building - 1946 Photo](#)



K-25 North  
Tower

# Environmental Management Budget & Prioritization

- Annually ORSSAB is asked to provide input on the DOE EM program's budget request. Budget requests are made two years in advance (FY+2).
- The EM Budget & Prioritization Committee reviews various cleanup scenarios developed by DOE that consider funding, technical challenges, availability of resources, etc. From these scenarios the committee develops a recommendation to DOE on how work should be prioritized for Oak Ridge.
- The recommendation is then brought before the board for consideration.

# Important Documents

## Federal Advisory Committee Act Charter

The EM SSAB and the site specific boards may provide advice and recommendations concerning the following EM issues:

- Cleanup standards and environmental restoration
- Waste management and disposition
- Stabilization and disposition of non-stockpile nuclear materials
- Excess facilities
- Future land use and long-term stewardship
- Risk assessment and management
- Cleanup science and technology issues



# Important Documents

## The Federal Facility Agreement

The Federal Facility Agreement (FFA) is a CERCLA-required cooperative agreement among DOE, EPA, and TDEC that promotes cooperation and participation of the three parties in cleaning up the Oak Ridge Reservation.

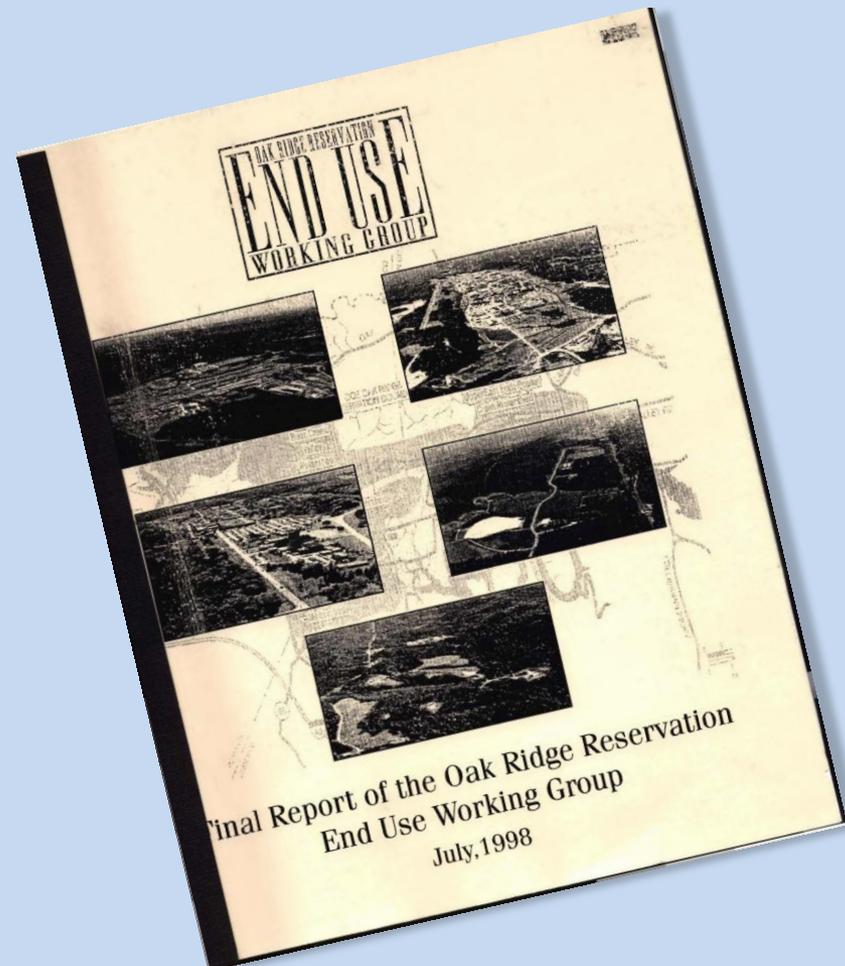
The Oak Ridge FFA was signed in 1992.

DOE Oak Ridge is responsible for seeing the provisions of the FFA are carried out. EPA and TDEC (the regulators) make sure DOE carries out its responsibilities.

# Important Documents

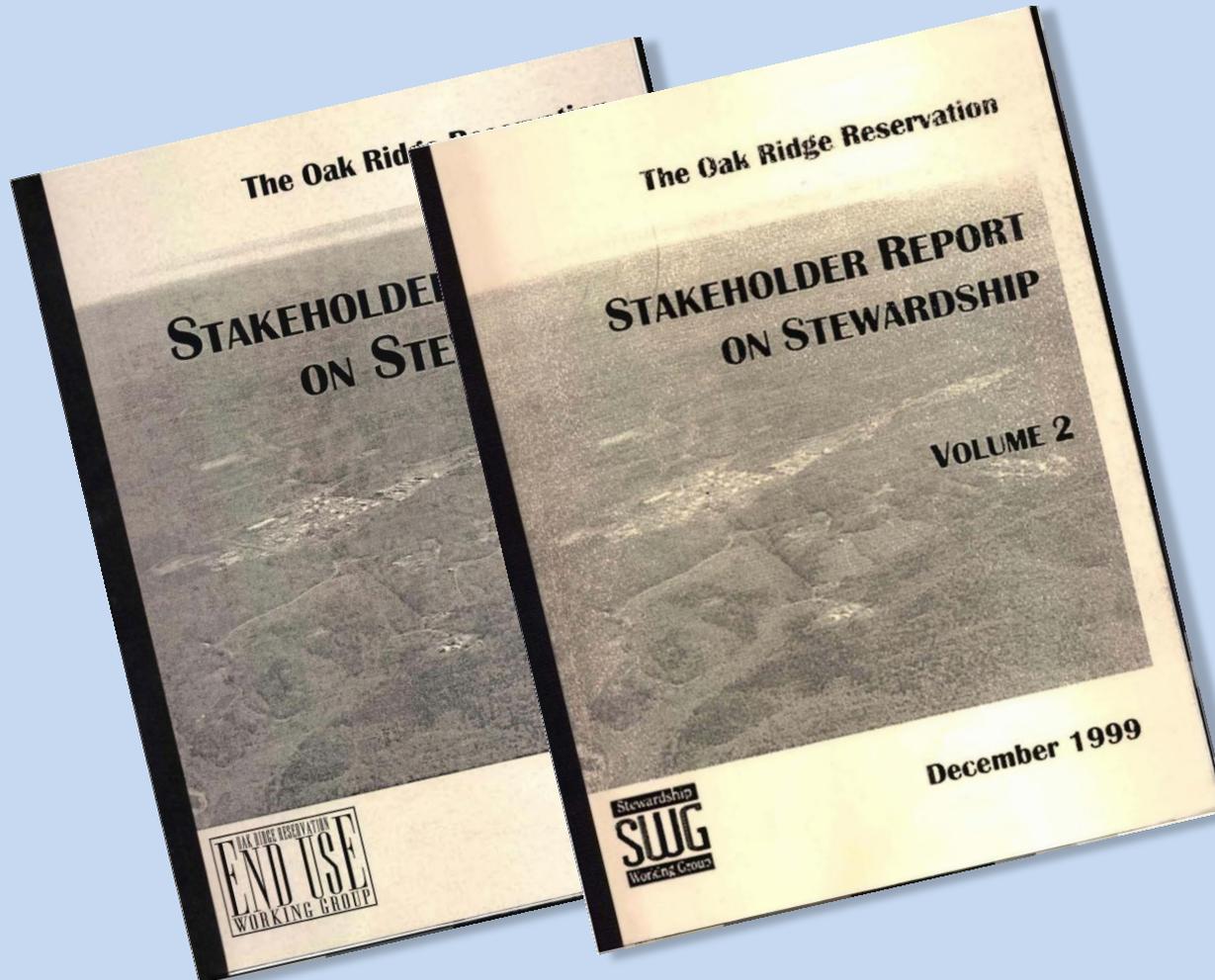
## Final Report of the End Use Working Group

- Recommendations for end (final) uses of contaminated areas of the ORR
- Determining community values to guide DOE's remedial action decision-making process



# Important Documents

## Stakeholder Reports on Stewardship



## How Recommendations Are Made

The ORSSAB provides advice and recommendations to the U.S. Department of Energy (DOE) Oak Ridge Environmental Management (EM) Program.

- The board can make recommendations whenever necessary
- DOE will occasionally request a recommendation
- Usually a recommendation is the result of a presentation to the board or a committee.

The job of writing a recommendation is delegated to the appropriate committee. An issue manager is assigned to work on the topic and is responsible for drafting a recommendation.

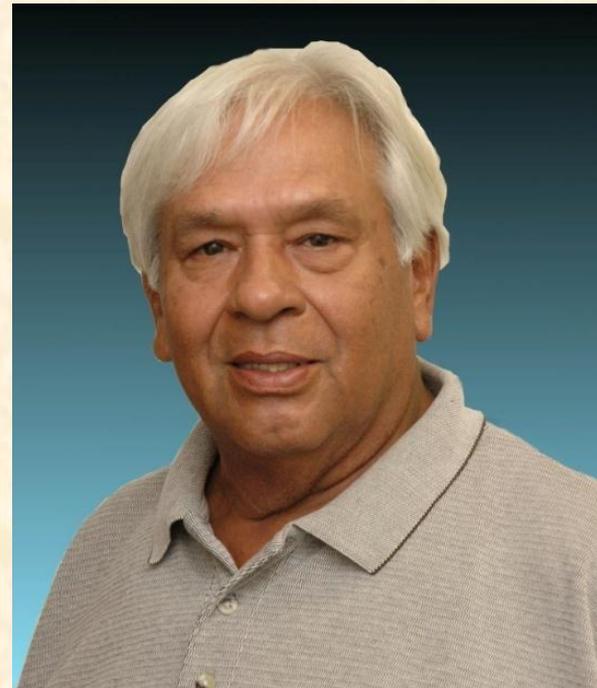
## How Recommendations Are Made

- A draft recommendation is reviewed by the committee where revisions may be made.
- The recommendation then goes to the Executive Committee for review
- The recommendation is presented to the board. If the board approves the recommendation is it sent to either the DOE Oak Ridge Assistant Manager for EM (John Eschenberg) or to an appropriate person at DOE Headquarters

## FY 2011 Board Leadership



Ron Murphree, Chair



Ed Juarez, Secretary

The vice chair position is currently vacant.

## Agency Liaisons



Dave Adler  
DOE Liaison



John Eschenberg  
Deputy  
Designated  
Federal Officer  
(DDFO)



Pat Halsey  
Federal  
Coordinator



Connie Jones  
EPA, Region 4



John Owsley  
TDEC

# Student Representatives

**Kasey McMaster**  
Oak Ridge  
High School



**Amira Sakalla**  
Hardin Valley Academy



2011-12 Student Representatives

# Board Member Responsibilities

- Attend board meetings
- Learn the language
- Serve on at least one committee
- Ask questions
- Tour the Oak Ridge Reservation
- Take advantage of travel opportunities to meetings and conferences
- Attend training sessions and workshops

## Conclusion

Additional information is available in specific training materials for individual committees, as well as supplemental material (fact sheets, reports, histories, guidance, board bylaws, etc.).

Contact board staff members or the board's Federal Coordinator for any assistance.

Contact information:

Pat Halsey, Federal Coordinator – 576-4025

Pete Osborne, ORSSAB staff – 241-4583

Spencer Gross, ORSSAB staff – 241-4584